

BUREAU OF PUBLIC LANDS

MANAGEMENT PLAN DENNISTOWN PLANTATION PUBLIC RESERVED LAND

This plan adopted April 1978.

All information is current as of that date
except as otherwise noted.

TABLE OF CONTENTS

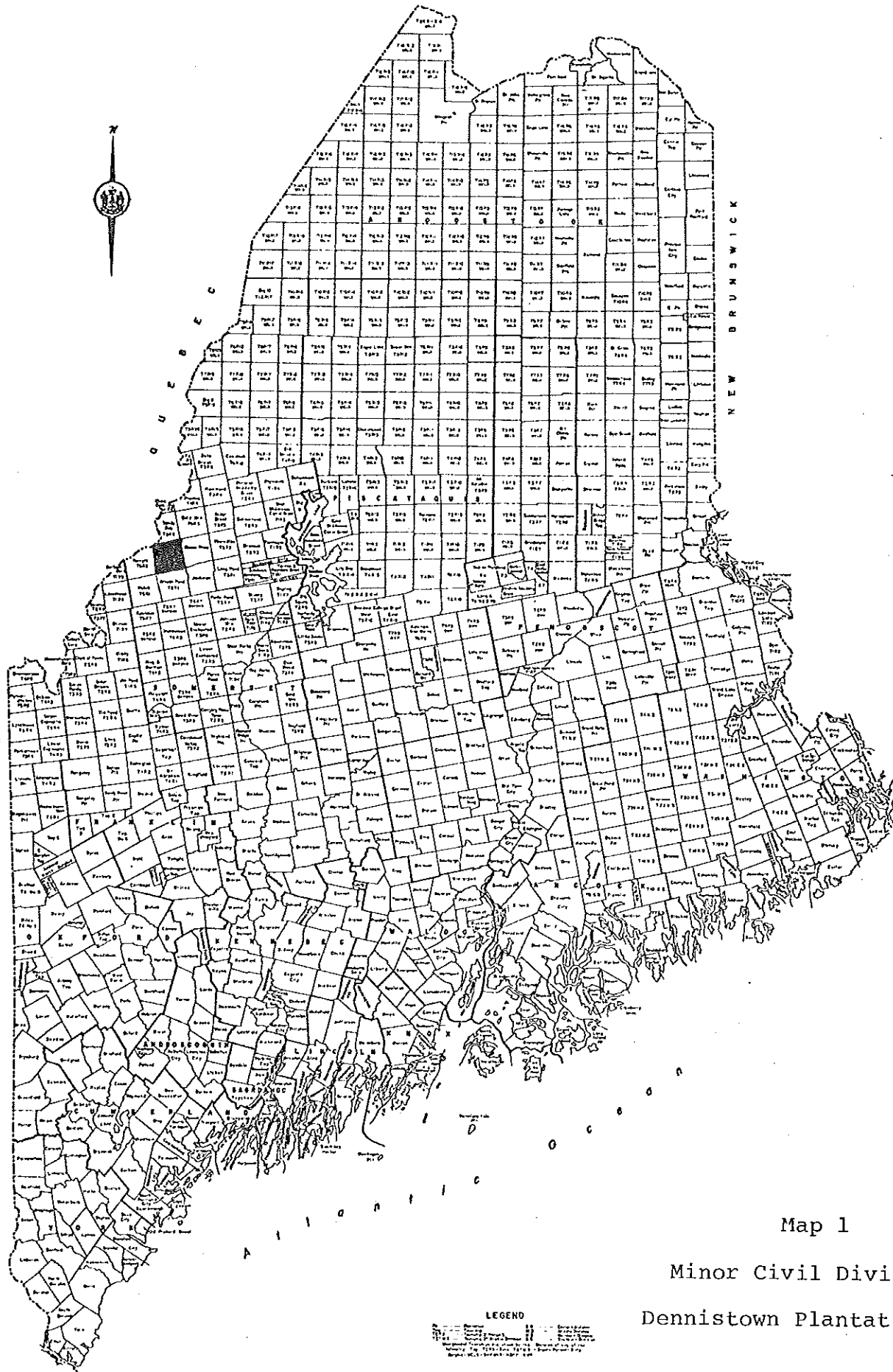
List of Maps	ii
List of Tables	iii
I. The Property	4
II. Setting and History	5
III. Resource Situation	7
IV. Management Recommendations	17
V. Schedule of Recommendations	24
VI. Appendix	25

LIST OF MAPS

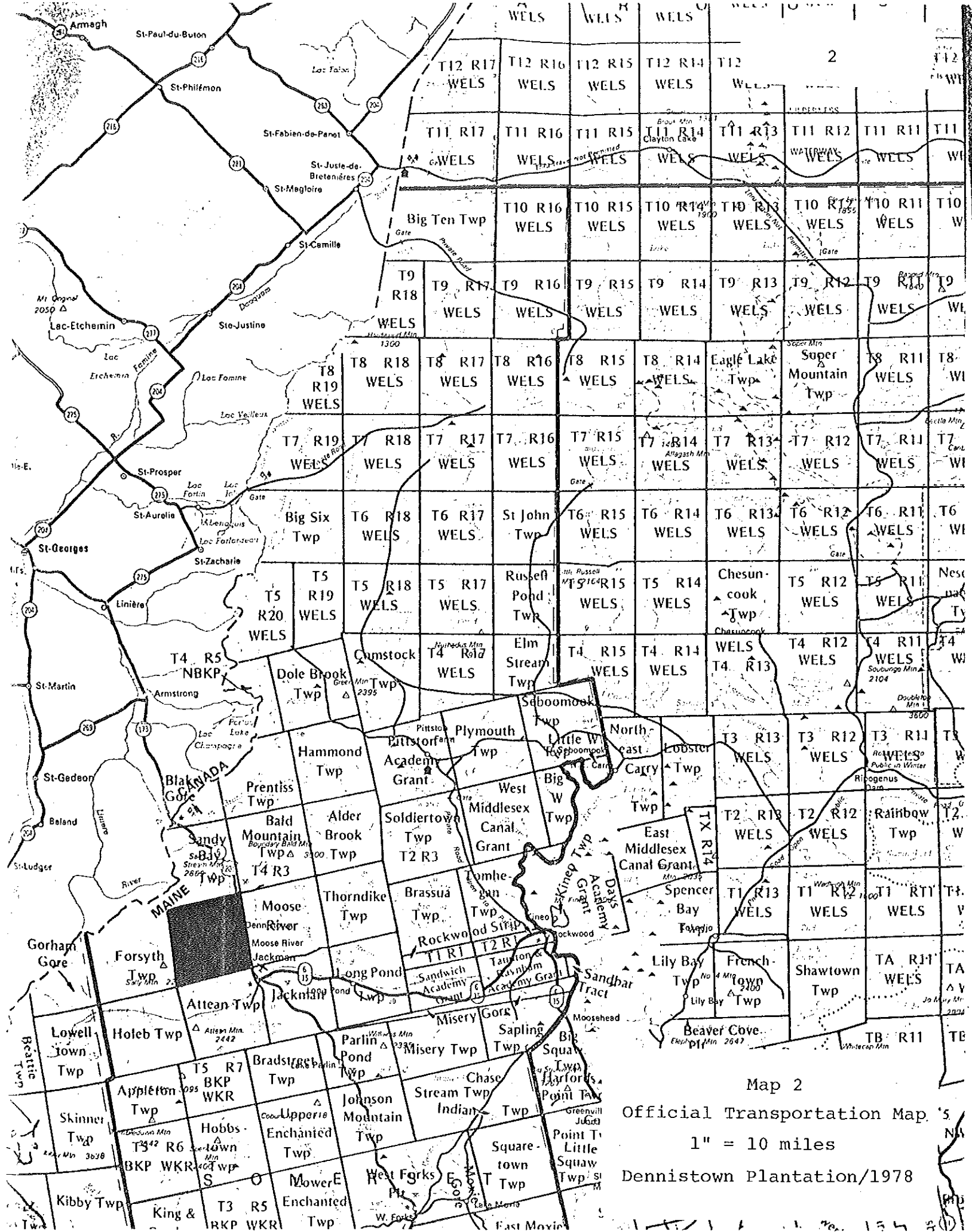
Map No.		Page
1	Township Location	1
2	Official Transportation	2
3	Location Within Township	3
4	Forest Cover Types	8
5	Land Use Regulation Commission Zoning	16
6	Public Lot Location	A-1
7	Metes and Bounds Survey	A-2
8	Surficial Geology	A-3

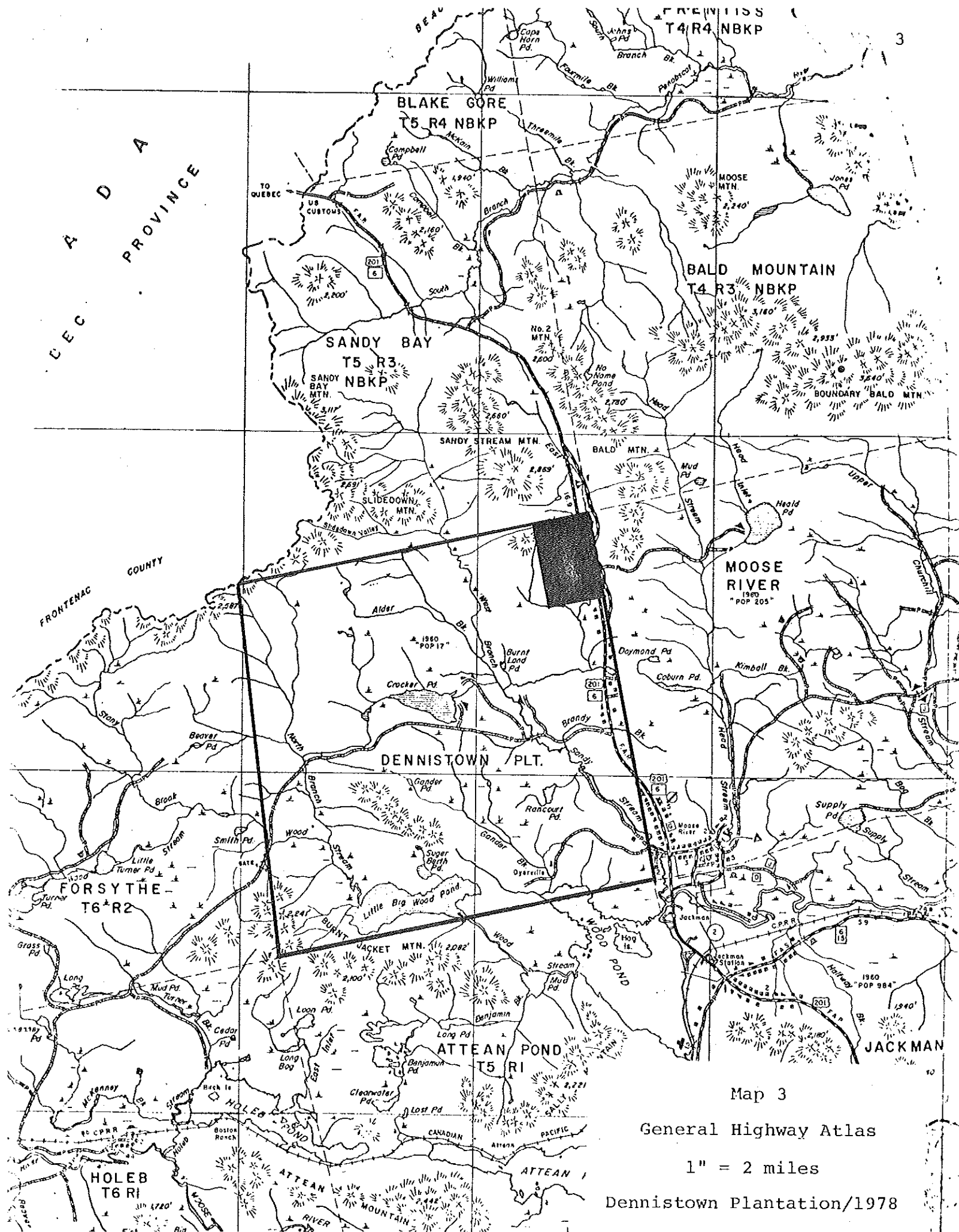
LIST OF TABLES

Table No.		Page
1	Acreage by Forest Type	5
2	Merchantable Volume and Basal Area by Forest Type	9
3	Annual Growth by Forest Type	10
4	Planned Harvests and Residual Volumes by Forest Type	20
5	1986 Inventory with Planned Harvests	21
6	Present (1976) Stand Table Summary	A-6
7	Future (1986) Stand Table Summary	A-7
8	Present (1976) Stock Table Summary	A-8
9	Future (1986) Stock Table Summary	A-9



Minor Civil Divisions
Dennistown Plantation/1978





I. THE PROPERTY

A. NAME

Dennistown Plantation Public Reserved Land, hereinafter referred to as the "Dennistown Public Lot" or the "Property".

B. LOCATION

The Dennistown Public Lot is located in the northeast corner of Dennistown Plantation, northern Somerset County, about six miles north of Jackman on U.S. Route 201. The Property consists of 1,000 mostly wooded acres in a rectangular lot with a north-south axis. The north and east lines of the Property follow the north and east lines of the Plantation. The MIDAS code number for the Property is #25090P.

C. MANAGEMENT AUTHORITY

Management authority is vested in the Bureau of Public Lands by Title 30, M.R.S.A., Section 4162.

D. MANAGEMENT OBJECTIVES

The Property will be managed as a forest resource with emphasis on timber products and wildlife habitat. Casual dispersed use of the recreation resources will be encouraged.

II. SETTING AND HISTORY

A. PHYSICAL

Elevations above sea level range from 1,380 feet in a swampy area in the south end of the Property to 1,900 feet on a hardwood ridge near the northwest corner of the Property. The ridge, about 10 chains from the west line, runs in a north-south direction from the north line about two-thirds the length of the Property. This ridge and a parallel hardwood ridge to the east are the dominant physical features of the Property. Slopes are generally 10-15 percent with some areas of ledge and slopes as high as 50 percent on the east side of the east ridge near the north line.

The east branch of Sandy Stream, which flows north to south, runs the entire length of the Property near the east line and, with two small tributaries, provides the drainage for the Property.

The forest is comprised of softwood, mixedwood and hardwood stands (Table 1). Type designations are contained in the Appendix, Page A-4.

TABLE 1 - ACREAGE BY TYPE

<u>S2</u>	<u>S3</u>	<u>M2</u>	<u>M3</u>	<u>H2</u>	<u>H3</u>	<u>All</u>
120	216	71	107	13	475	1,002

The major tree species are red spruce, balsam fir, sugar maple, red maple and yellow birch. There are three major cover types as defined by the Society of American Foresters:

Type 33 - Red Spruce, Balsam Fir

Type 31 - Red Spruce, Sugar Maple, Beech

Type 25 - Sugar Maple, Beech, Yellow Birch

B. SOCIO-ECONOMIC FACTORS

Dennistown Plantation is rural in character with most residents engaged in lumbering or vacation-travel related activities. The population was 48 at the time of the 1970 census. Moose River (population 255) is the nearest town, two miles south of the Public Lot. Jackman (population 820) is six miles south of the Property on U.S. Route 201. Skowhegan, county seat and largest town in Somerset County, lies 83 miles S.S.E of the Property. The Canadian border, Province of Quebec, is 10 miles to the north of the Property.

C. MANAGEMENT HISTORY

Harvest income records dating from 1920 show income of \$27,764.51 from several sales between 1920 and 1961, the last time the Property was cut. The records show high income figures from stumpage in the 1940's (\$12,213.61), 1953-55 (\$8,972.03) and 1960-61 (\$2,479.97). There are no records, however, of the species and volumes harvested.

The Dennistown Public Lot was first surveyed in 1841. The most recent survey was conducted by the Maine Forest Service in 1962 and the lines were cleared and marked at that time. The lines were again cleared and marked in 1968 and 1976.

III. RESOURCE SITUATION

A. ACCESS AND TRANSPORTATION

U.S. Route 201 crosses the Property parallel to and a short distance from the east line. The east branch of Sandy Stream, which runs generally parallel to and just west of Route 201, limits access from the highway to most of the lot. An old winter road runs west from Route 201 near the north line and crosses the Property. Another winter road runs from Route 201 south of the Property up to the south line.

Canadian Pacific Railways has a freight terminal at Jackman, six miles south of the Property.

B. UTILITIES

New England Telephone services Dennistown Plantation with a line that runs through the Public Lot along Route 201. Central Maine Power Company maintains a distribution line along Route 201 in the Public Lot.

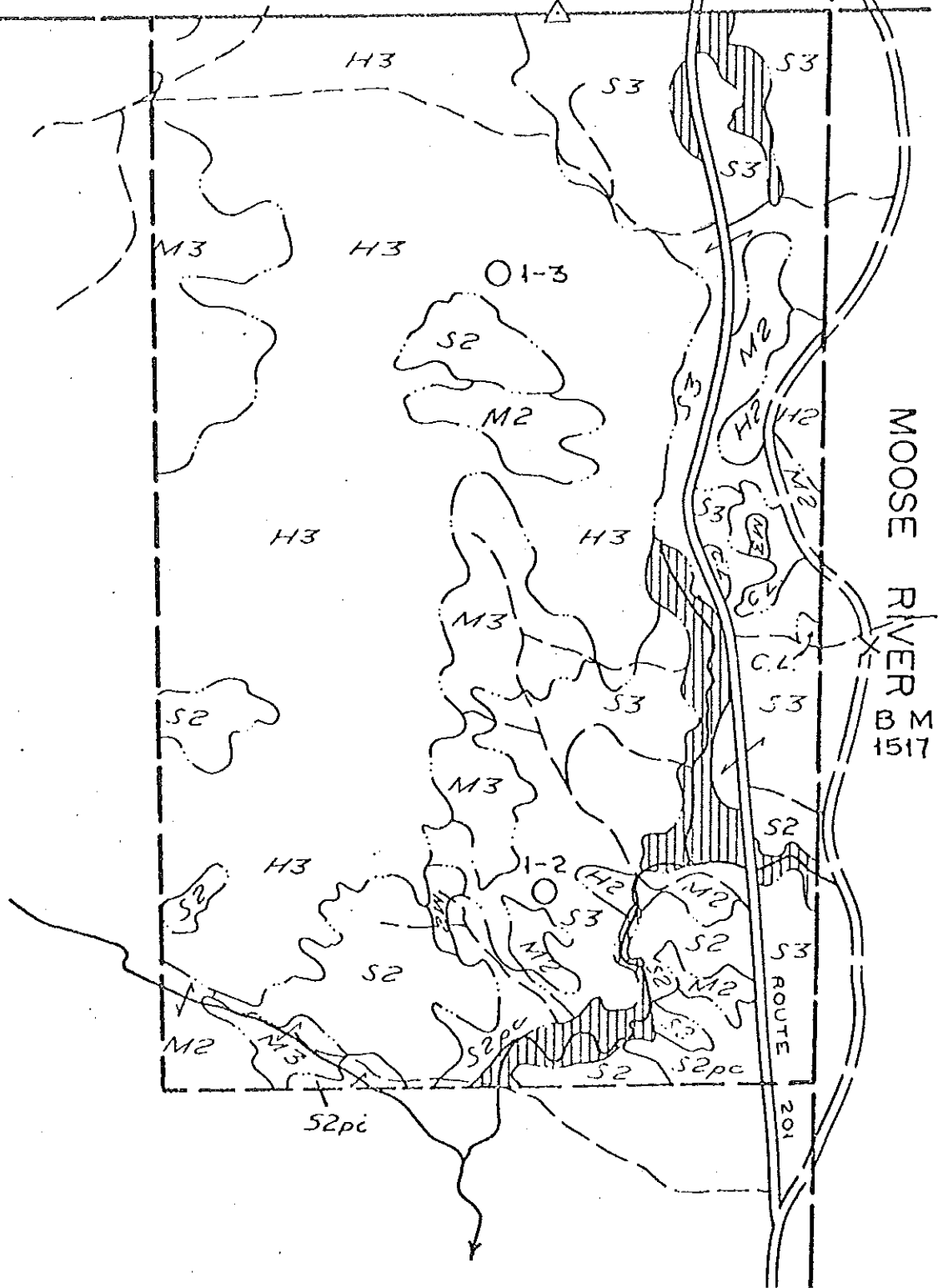
C. TIMBER

For an explanation of the collection, utilization and reliability of the inventory and growth data used in preparing Section III.C, Timber Resource Situation and Section IV.B, Timber Management Recommendations, see Appendix, Page A-11.

Timber types and situations on the Property vary considerably. The two north-south oriented ridges are populated with hardwood stands. The softwood stands are located along U.S. Route 201 and in the low lying areas along the south line. The mixedwood stands are found on the hardwood ridges and the softwood flats (Map 4).

BALD MTN
T4 R3

SANDY BAY TWP.



Map 4

Forest Cover Types

1" = 20 chains

Dennistown Plantation/1978

The major species on the 1,002 wooded acres (forest acreage figures are based on aerial photographs and differ somewhat from actual acreage) are red spruce, balsam fir, hard maple and yellow birch. Volume in trees 4.6 inches in diameter and over is 2,439 ft³/acre. Total volume is 2,443,710 ft³ (Table 2). The average annual growth rate is 90.7 ft³/acre.

TABLE 2 - MERCHANTABLE VOLUME AND BASAL AREA BY TYPE

<u>Type</u>	<u>Basal Area/Acre</u>	<u>Cubic Feet</u>	
		<u>Vol./Acre</u>	<u>Total Volume</u>
S2	117	2,278	273,377
S3	142	2,899	626,149
M2	97	1,877	133,251
M3	104	2,491	266,590
H2	82	1,694	22,027
H3	103	2,363	1,122,317
ALL	112	2,439	2,443,710

(a) The softwood stands on the southern part of the Property and to the west of U.S. Route 201 are generally found in low-lying areas. The growth is predominantly fir interspersed with cedar on the more poorly drained sites. The softwood stand in the northeast corner of the Public Lot is also on a poorly drained site but lacks the cedar component. In the southeast corner of the Property, east of U.S. Route 201, is a heavily stocked fir stand and a small stand of large, limby spruce along the south property line.

The S2 type is heavily stocked with a volume of 2,278 ft³/acre of which 48 percent is fir and 27 percent is spruce. The products are quite evenly distributed among the species. Of the total volume, 60 percent is pulpwood, 19 percent is small logs, 18 percent is sawtimber and the remainder is boltwood and topwood.

The S3 type is more heavily stocked at 2,899 ft³/acre. Spruce is the dominant species and constitutes 66 percent of the volume. Of the total S3 type volume, 65 percent is pulpwood and 35 percent is small logs.

The regeneration is mostly suppressed fir found in open spots, especially around small blowdown areas scattered through the stands. The average annual volume growth varies considerably between the S2 and S3 type in the region (Table 3).

TABLE 3 - ANNUAL GROWTH* BY TYPES
(Regional Data)

Type	(FT ³) Vol. Growth/Acre	Cords/Acre	(FT ³) Total Vol. Growth
S2	59.1	0.69	7,092
S3	92.4	1.09	19,958
M2	90.7	1.07	6,440
M3	73.3	0.86	7,843
H2	90.1	1.06	1,171
H3	101.9	1.20	48,402
ALL	90.7	1.07	90,906

1 cord = 85 ft³

*No allowance made for mortality

The heavy budworm infestation has slowed the growth rate on this lot.

(b) The mixedwood stands are smaller and more scattered than the hardwood and softwood stands. The annual growth in the M2 stands is $90.7 \text{ ft}^3/\text{acre}$ and the stocking is $1,877 \text{ ft}^3/\text{acre}$. Volumes are evenly distributed between softwood and hardwood species with red spruce, balsam fir, red maple and white birch in the majority. The products are 68 percent pulpwood, 14 percent small logs, 8 percent sawtimber and 7 percent boltwood. The reproduction is mostly red spruce and balsam fir.

The M3 type has $2,491 \text{ ft}^3/\text{acre}$. Product distribution is quite favorable, with 64 percent of the merchantable volume in pulpwood, 21 percent in sawtimber, and the remainder in various other products. The M3 stand in the northwest corner of the Property (Map 4) has been cut, is quite dense and contains mostly balsam fir, white birch and red maple.

(c) The hardwood types represent the largest contiguous stand on the Public Lot (Map 4). Quality and size of the timber varies through the stands. The areas on the west side of the Property contain somewhat larger trees. Reproduction of mostly hard maple, yellow birch and beech is well established throughout, and is quite advanced in the stands with the largest trees. There is a fairly even height stratification through most of the stands.

The major species are sugar maple, red maple and yellow birch, with a scattering of beech and white birch.

The H2 stands, covering 13 acres, are stocked at $1,694 \text{ ft}^3/\text{acre}$ and are growing at a rate of $90.1 \text{ ft}^3/\text{year}$. Eighty-one percent of the volume is in pulpwood and the remainder is in various other products.

The H3 type has a volume of 2,363 ft³/acre and growth averages 101.9 ft³/year. The volumes are well distributed among the products. Estimates show 25 percent of the merchantable volume in small logs and sawtimber. A higher percentage of these products will be found in selected areas.

There is no evidence of recent harvesting in the hardwood stands. Past harvests appear to have been sawlog cuts, as old tops of pulpwood size were left unused in the woods.

D. GEOLOGY

The Property is situated in Quadrangle 65, standard United States Geological Survey topographic quadrangle index. There are no known mineral, gravel or peat deposits of commercial significance. A soils map has not been prepared for this area.

There has been some mineral exploration in Dennistown Plantation for copper deposits, but the Property is not a copper prospect, according to the Bureau of Geology.

E. HYDROLOGY

The Property is part of the Kennebec River watershed. The east branch of Sandy Stream begins north of the Public Lot and flows south crossing the north line near the northeast corner. This stream runs the entire length of the Property near the east line and exits near the center of the south line. Together with two small tributaries, the east branch provides the major drainage for the lot. It joins Sandy Stream to the south of the Property, which in turn flows into Wood Pond.

There are some swampy areas adjacent to the east branch in the northeast corner of the Property and near the center of the south line. There is also a wet area about 22 acres in size near the center of the west line (Map 5).

F. FISHERIES AND WILDLIFE

On a recent visit to the Property, ruffed grouse and red squirrels were sighted, and recent signs of moose, beaver, and snowshoe hare were noted. Bear are found in the general area as are other fur-bearing animals such as marten, fisher and mink. The Property is near the northern limit of the range of white-tailed deer and the deer population in Dennistown and the adjacent towns is very low. There are no deer wintering areas on the Property. Piliated woodpeckers are commonly found in this area.

G. RECREATION

There is no known demand for recreational use of the Property except for hunting, and the land is not particularly suited for other uses. Casual dispersed recreational uses will be encouraged as demand develops.

H. FIRE, INSECTS, DISEASE

There is no evidence of any recent fires on the Property.

The fir stands in the southern part of the Public Lot are heavily infested with spruce budworm. Little mortality is evident at this time. The Property was not included in the 1977 spruce budworm spray program although it will be in 1978. Frequent monitoring of this area will be necessary to observe future mortality.

The beech scale-Nectria complex is present but is not a management problem because of the limited amount of this species on the Property.

No other insects or diseases have caused any major damage to the Public Lot.

I. OTHER ECONOMIC RESOURCES

The woodlands constitute the sole known economic resource of the Dennistown Public Lot at this time.

J. LAND USE CONSTRAINTS

1. Easements, Leases, Rights of Way: U.S. Route 201 occupies an easement granted by the Forest Commissioner dated July 22, 1957 and recorded in the Somerset Registry of Deeds, Book 596, Page 174. There are no other easements, leases or rights of way affecting the Property.

2. Deed Restrictions: There are no deed restrictions on the Dennistown Public Lot.

3. Special Uses: There are no special use restrictions affecting the Property.

4. Zoning: The Land Use Regulation Commission (LURC) has zoned the east branch of Sandy Stream as a shoreland protection district

(P-SL2) which restricts activity within 75 feet of the normal high water mark. The 22 acre wet area with alders near the center of the west line has been zoned a wetland protection subdistrict (P-WL), and its bounds zoned a shoreland protection district (P-SL2). (Map 5)

5. Critical Areas: There are no known features of unusual natural, scenic, scientific or historical significance which should be nominated for critical area registration.

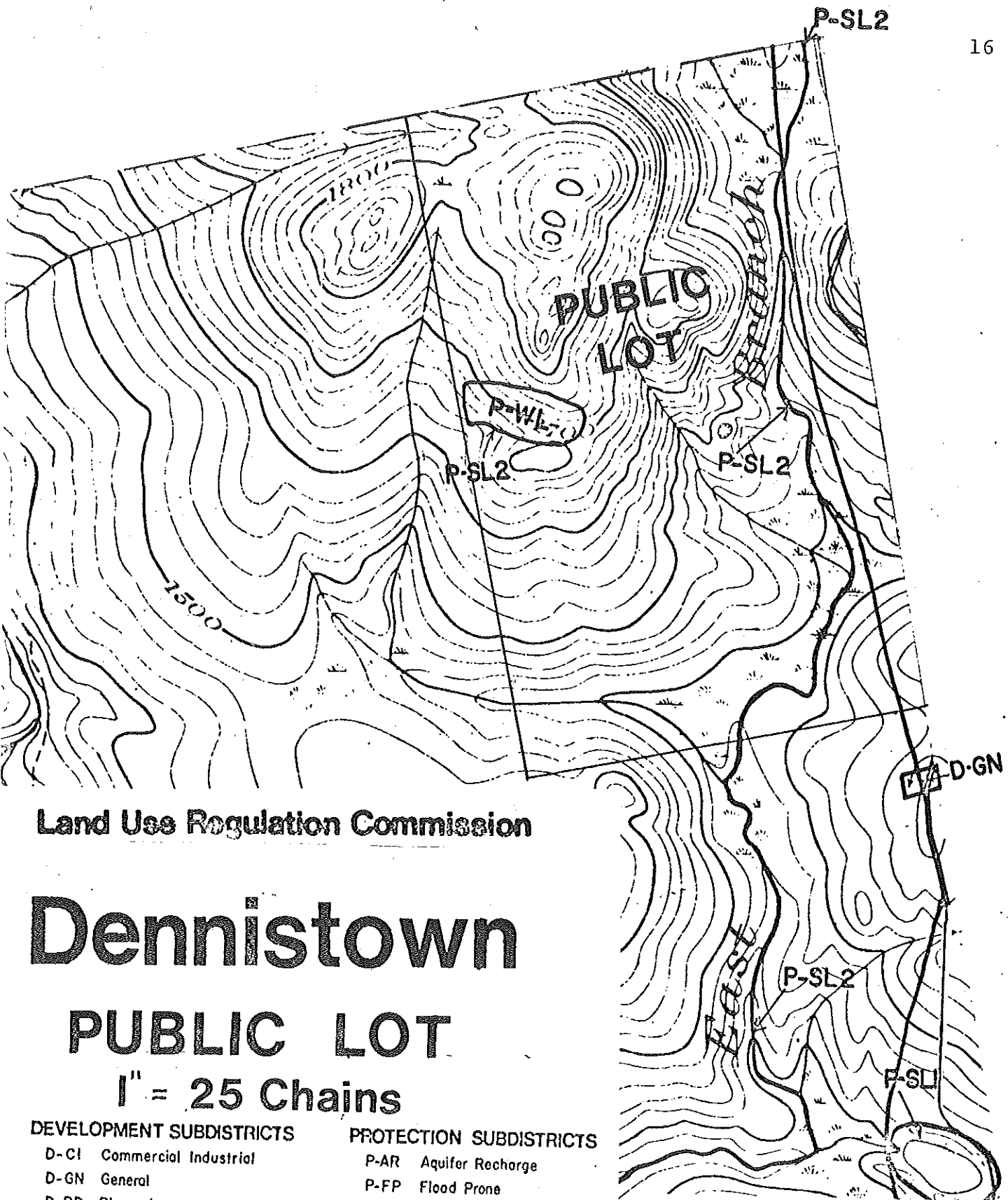
K. ADMINISTRATIVE FACILITIES

There are no administrative facilities on the Dennistown Public Lot. The Bureau of Forestry has facilities in Jackman and Greenville. The Department of Inland Fisheries and Wildlife maintains an office in Greenville.

L. MARKET ANALYSIS

The log market is limited in the area. There are two recently opened mills, one in Holeb and the other in Greenville. Other than Canadian outlets, these are the only large sawmills in the area.

Pulpwood markets are even more distant. The most likely buyer at this time would be Scott Paper Company in Hinckley. Other possible outlets are International Paper Company in Jay and Boise-Cascade Corporation in Rumford.



Land Use Regulation Commission

Dennistown

PUBLIC LOT

1" = 25 Chains

DEVELOPMENT SUBDISTRICTS

- D-CI Commercial Industrial
- D-GN General
- D-PD Planned
- D-RS Residential

PROTECTION SUBDISTRICTS

- P-AR Aquifer Recharge
- P-FP Flood Prone
- P-FW Fish & Wildlife
- P-GP Great Ponds
- P-MA Mountain Areas
- P-RR Recreation
- P-RP Resource Plan
- P-SG Soils & Geology
- P-SL Shorelands
- P-SL1 250' strip
- P-SL2 75' strip

MANAGEMENT SUBDISTRICTS

- M-GN General
- M-HP Highly Productive
- M-NC Natural Character

All boundaries are shown as a solid line (—).

Map 5

Dennistown Plt./1978

IV. MANAGEMENT RECOMMENDATIONS

A. GENERAL

The Property will be used primarily for timber production and wildlife habitat management.

B. TIMBER RECOMMENDATIONS

1. Management Units: The Dennistown Public Lot can best be managed as a single unit because of the scattering of the forest types and the variations in terrain. Treatment will vary by types.

2. Type Treatment: (a) The S2 and S3 types are quite similar in species composition and quality. They differ in that the S3 stands have somewhat more volume.

The management goal for the softwood types is suppression of the spruce budworm and production of quality softwood sawlogs. Spruce production will be favored by concentrating harvests in the fir component.

The desired result is a high percentage of spruce in the residual stand which will produce enough seed for spruce regeneration.

Harvesting will be by single tree and group selection. All trees will be marked before harvesting.

The S3 stands are scheduled for a harvest in 1979. This will be a major harvest with the removal of 817 ft³/acre (40 ft³/acre basal area) totaling 176,472 ft³. The residual volume will be 2,359 ft³/acre.

The S2 stands will be harvested in conjunction with the S3 stands. Here the treatment will be an improvement cut of 487 ft³/acre (25 ft³/acre of basal area). This will leave a residual of 1,968 ft³/acre (101 ft²/acre of basal area). The purpose of this light cut is to weed

out the poorest trees without opening the stand to the danger of blowdown. If the spruce budworm continues feeding heavily, the entire stand may be in poor condition. If this occurs, a heavier cut may be necessary to guard against mortality losses.

(b) The mixedwood types will be managed as unevenaged stands on a sustained yield basis. All harvesting will be done on a single tree and group selection marked wood basis. Spruce and the more tolerant hardwood species will be favored.

The mixedwood stands are not scheduled for harvesting until 1984, based on current growth rates. (This plan may be altered as necessary to salvage budworm damaged fir.)

At that time, 790 ft³/acre (33 ft² of basal area) will be removed from the M3 stands. This amounts to a total of 84,530 ft³. Since the reproduction is well established, the residual stand (95 ft²/acre of basal area) should begin growing at a vigorous rate.

The M2 stands will be harvested at a rate of 774 ft³/acre (basal area of 40 ft²/acre) for a total of 54,954 ft³. The residual stand will be stocked at 1,829 ft³/acre (95 ft²/acre of basal area). Reproduction is well advanced into the sapling stage and should respond with vigorous growth after the planned harvest. Overall stand growth will be low after the harvest but increases should be rapid as the residual stand responds to the increased light and space.

(c) The hardwood stands have good height stratification, which makes the movement to unevenaged management relatively simple. Harvesting will be by single tree and group selection with all trees marked prior to harvest. The better quality yellow birch, sugar maple and beech will be favored by the harvesting of low value red

maple and other low quality trees. Mature white birch will be taken to prevent post logging decadence (mortality due to site changes caused by the harvest). The overall plan is to produce a stand of well spaced and good quality tolerant hardwoods.

The H2 stands will be harvested in conjunction with the mixedwood stands in 1984. Volume removals will be $661 \text{ ft}^3/\text{acre}$ ($32 \text{ ft}^2/\text{acre}$ of basal area) for a total of $8,593 \text{ ft}^3$, leaving a residual stand of $1,754 \text{ ft}^3/\text{acre}$ ($85 \text{ ft}^2/\text{acre}$ of basal area). The annual growth rate will be lowered but should rebound quickly because of the good quality residual stand. The Department of Inland Fisheries and Wildlife has made specific recommendations which are contained in Section IV.F.

The H3 stands will be harvested in 1979. Maximum volume removals will be $711 \text{ ft}^3/\text{acre}$ ($31 \text{ ft}^2/\text{acre}$ of basal area). This will leave a residual stand of $1,958 \text{ ft}^3/\text{acre}$ ($85 \text{ ft}^2/\text{acre}$ of basal area). The total harvest will be approximately $337,725 \text{ ft}^3$. The growth response is expected to be good due to the good supply of sapling and pole stage trees in the stands.

3. Rotation and Cutting Cycle: The rotation for the tolerant hardwoods and spruce will be 100 years. Balsam fir and white birch are shorter lived species and will have a rotation of 70 years. The cutting cycle in all types will be 15 years.

4. Growth and Stocking: Growth rates generally run high in the western region (Table 3).

It is doubtful that the softwood types will increase their growth if the spruce budworm infestation continues. Individual tree growth should improve with the scheduled harvests, but stand growth will remain low until the stocking has built up.

Growth rates in the mixedwood stands are not expected to increase prior to the harvest due to the fir component in the stand. However,

after the planned harvests the growth rates should begin to increase due to the release of the more vigorous hardwoods.

The softwood types are not expected to increase their growth due to the budworm problem. If the budworm problem continues to worsen, the growth will decline. After the planned harvests, the individual tree growth will increase, but the stand growth will remain low until the stocking is built up.

Stocking varies from 1,694 ft³/acre in the H2 type to 2,899 ft³/acre in the S3 type. The planned harvest will reduce these figures (Table 4).

TABLE 4 - PLANNED HARVESTS AND RESIDUAL VOLUMES BY TYPE
Cubic Feet

<u>Type</u>	<u>Vol./Acre Removal</u>	<u>Residual Vol./Acre</u>	<u>Year of Harvest</u>	<u>Acreage</u>	<u>Total Harvest</u>
S2	487	1,968	1979	120	58,440
S3	817	2,359	1979	216	176,472
M2	774	1,829	1984	71	54,954
M3	790	2,287	1984	107	84,530
H2	661	1,754	1984	13	8,593
H3	711	1,958	1979	475	337,725

5. Allowable Cut: Flexible Limits for harvesting will be followed for the various timber types. These limits will encourage development of well-stocked residual stands of improved quality stems by application of basal area removal guides based on average stand diameter and number of stems. Stocking predictions for each timber type (Table 5) do not provide for mortality and ingrowth.

TABLE 5 - 1986 INVENTORY WITH PLANNED HARVESTS

<u>Type</u>	<u>Acreage</u>	<u>Vol./Acre Cubic Feet</u>	<u>Total Volume Cubic Feet</u>
S2	120	2,325	279,000
S3	216	2,887	623,592
M2	71	2,006	142,426
M3	107	2,421	259,047
H2	13	1,941	25,233
H3	475	2,455	1,166,125
ALL TYPES			2,495,423

C. ACCESS AND TRANSPORTATION

It is recommended that roads be laid out on the ground in conjunction with scheduled operations and be designed for minimal environmental impact.

D. GEOLOGY

Local gravel deposits should be located for possible future use.

E. HYDROLOGY

All operations and road construction will be conducted so as to protect the water resources and will equal or exceed LURC guidelines for water quality protection.

F. FISHERIES AND WILDLIFE

Comments and recommendations from the Department of Inland Fisheries and Wildlife are as follows:

1. Diversity within and between stands is encouraged. Diversity of habitat type is the basis for maintaining the greatest diversity of wildlife species.

2. The high altitude S2 stands are an important component of the upland furbearer habitat (fisher and pine marten). Any harvesting should be limited to very low volume removals to assure adequate time for tree crowns to close and disturbed root systems to stabilize.

3. Harvesting in the H2 and H3 types should be planned so as to leave a residual stand containing 30-35 square feet of basal area in sawtimber size trees. This provides for adequate mast production and good distribution of openings, seedlings, sprouts and poles.

4. One nest and den tree per five acres should be left evenly distributed after harvesting. These trees may be killed by girdling but should be left standing.

5. Log landings should be seeded with clove mix or soil conservation mix following harvesting operations.

G. RECREATION AND PUBLIC USE

Casual dispersed recreational use of the Property will be encouraged.

H. FIRE, INSECTS, DISEASE

The planned harvesting activities will reduce the food supply (balsam fir) for the spruce budworm. Careful monitoring of budworm population levels will be necessary. Recommended control measures from the Bureau of Forestry will be followed. Control of the beech scale-Nectria complex will not be considered because the problem is not severe. No other insects or diseases need control measures.

Forest fire prevention procedures will be followed during any activities on the Property. Roads constructed for harvest operations will be maintained to allow fire control equipment access to the Property.

I. OTHER ECONOMIC RESOURCES

No recommendations at this time.

J. LAND USE CONSTRAINTS

LURC regulations will be followed in all operations.

K. ADMINISTRATIVE FACILITIES

No recommendations at this time.

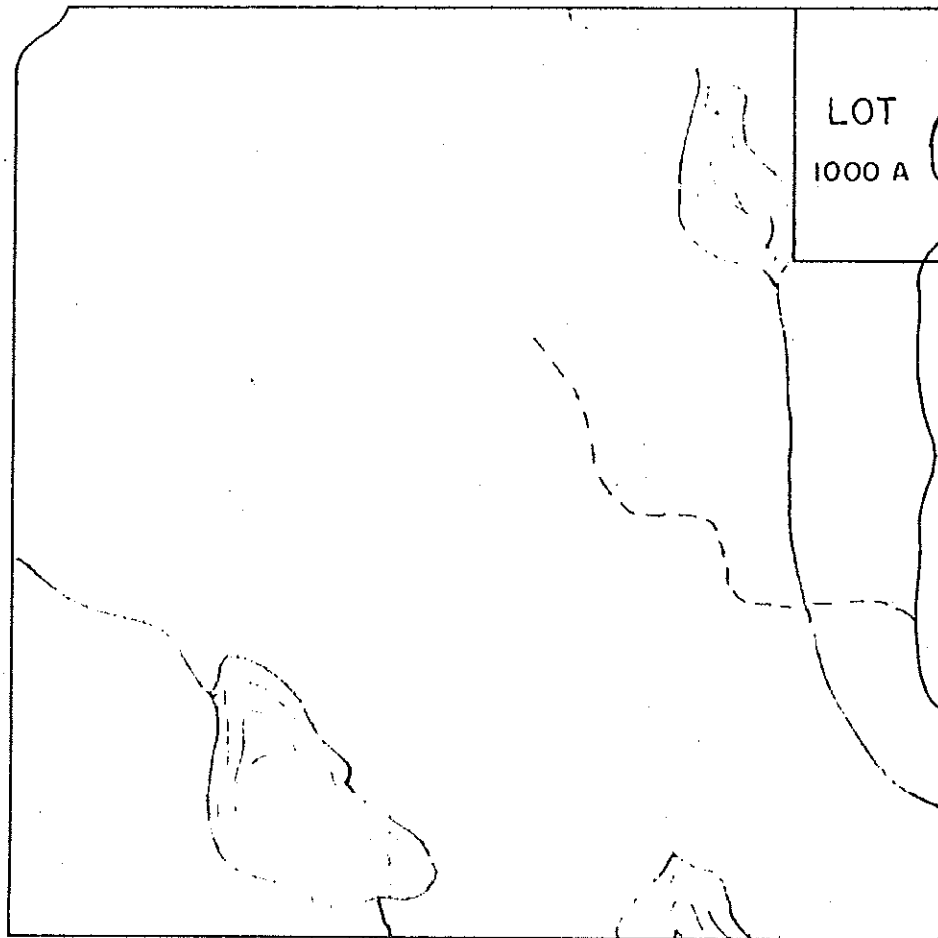
L. MARKETING

Efforts will be made to assist operators in finding suitable markets for the timber harvested.

V. SCHEDULE OF RECOMMENDATIONS

<u>Year</u>	<u>Type</u>	<u>Operation</u>	<u>Acres</u>
1979	S2, S3, H3	Harvesting (572,637 ft ³)	811
1983	A11	Re-do Exterior Boundary Lines	1,002
1984	M2, M3, H2	Harvesting (148,077 ft ³)	191
1985	A11	Re-inventory Forest Resources	1,002
1986	A11	Update Management Plan	1,002

VI. APPENDIX



SOMERSET
NBKP

DENNISTOWN PL.
PUBLIC LOT

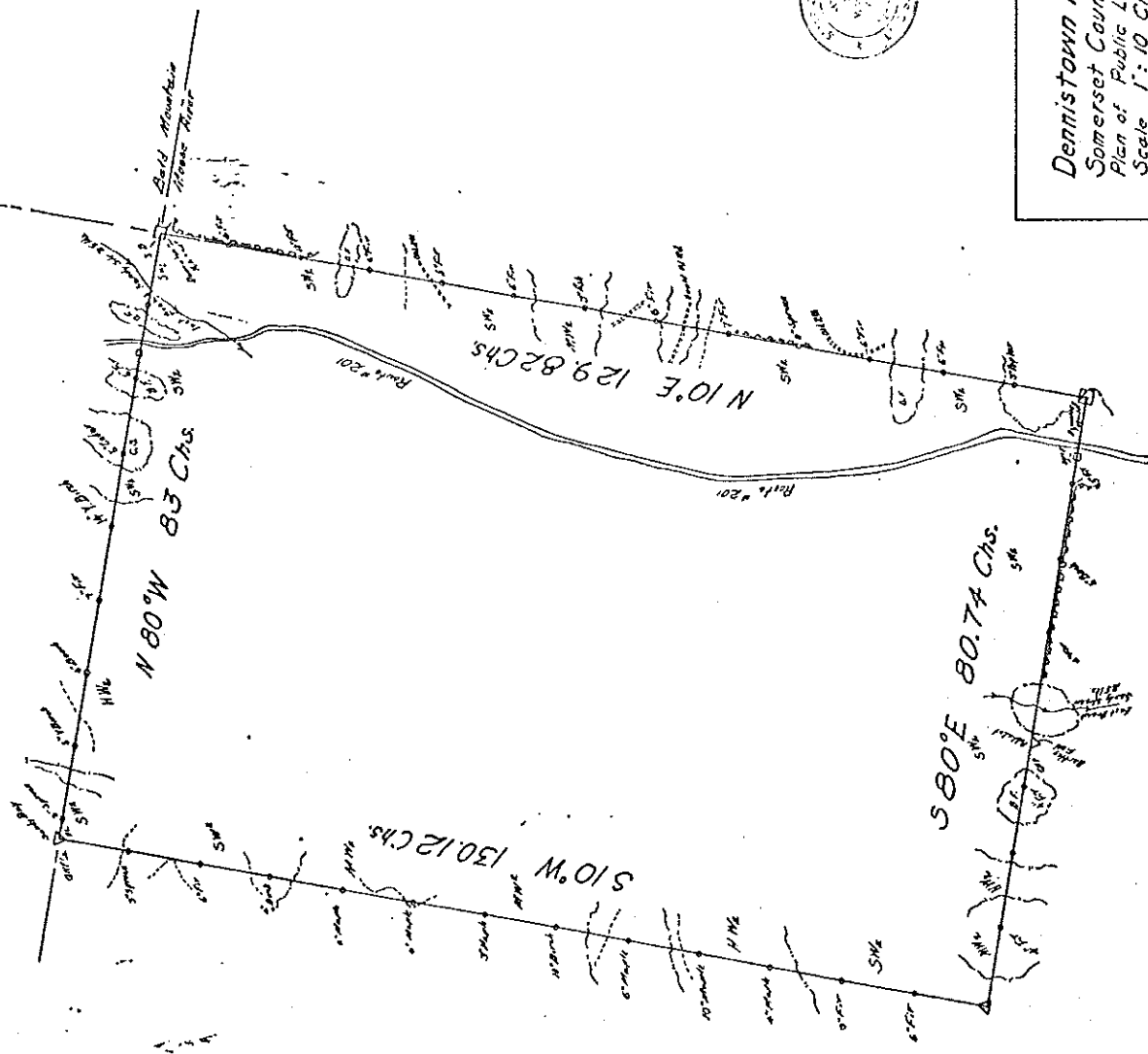
Map 6

Public Lot Location Map

1" = 100 chains

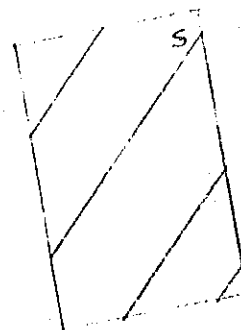
Dennistown Plt./1978

*Dennistown Plantation
Somerset County, Maine
Plan of Public Lot
Scale 1" = 10 Chains
Requested by - F.E. Holt, Director
Bureau of Forestry
Drawn by - James V. Elliott, Forest Ranger
Date December 18, 1973*



Map 7
Metes and Bounds Survey
1" = 24 chains
Dennistown Plt./1978

[illegible]



MAP SYMBOL	GEOLOGIC UNIT (MAP UNIT)	SURFACE EXPRESSION
	Recent Alluvium, floodplain sediments	Generally flat
	Swamp	Generally flat, water seasonally at or near surface
	Glacial and marine sediments	Confined to valleys— surface topography usually flat
	Glacial lake sediments	Flat where uneroded
	Outwash	Local flat topped delta surfaces, mostly confined to valleys as terraces above floodplain
	Ice-contact washed drift	Variable. Ridges (eskers), flat terraces (kame terraces), isolated conical hills (kames). All features have collapsed, ice-contact slopes, depressions (kettles).
	End moraines	Arcuate ridges, 5— 40 feet, 25—300 feet wide, up to 2 miles long
	Ground moraine	Blanket deposit. Surface topography controlled by underlying bedrock

Map 8
 Surficial Geology Map
 Scale 1:62,500
 Dennistown Plt./1978

TABLE
CLASSIFICATIONS OF MAJOR FOREST TYPES

S1

S1 is a seedling-sapling stand containing more than 75 percent softwood species with a volume of less than 510 cubic feet.

S2

S2 is a second growth stand containing more than 75 percent softwood species with a volume in excess of 510 cubic feet per acre and less than half its volume in sawlog size trees.

S3

S3 is a mature stand comprised of more than 75 percent softwood with a volume in excess of 1,275 cubic feet per acre and more than half the volume in sawlog size trees.

M1

M1 is a seedling-sapling stand containing not less than 25 percent nor more than 75 percent of either softwood and hardwood and has a volume of less than 510 cubic feet per acre.

M2

M2 is a second growth stand containing not less than 25 percent nor more than 75 percent of either hardwood or softwood and has a volume in excess of 510 cubic feet per acre with less than half the volume in sawlogs.

M3

M3 is a mature stand containing not less than 25 percent nor more than 75 percent hardwood or softwood with a volume not less than 1,275 cubic feet per acre with more than half the volume in sawlog size trees.

H1

H1 is a seedling-sapling stand containing more than 75 percent hardwood species with a volume less than 510 cubic feet.

H2

H2 is a second growth stand of at least 75 percent hardwood with a volume over 510 cubic feet per acre with less than half the volume in sawlog size trees.

H3

H3 is a mature stand of more than 75 percent hardwood species and having a volume over 1,275 cubic feet per acre with more than half the volume in sawlog size trees.

NP

NP is a non-productive area such as open swamp, bogs, alders, roads, water, or other non-forest area.

EXPLANATION OF INVENTORY, GROWTH ESTIMATES,
AND SILVICULTURAL PRESCRIPTIONS

Following is a brief explanation of the methods used to gather inventory data, make growth estimates, and prescribe silvicultural treatments on the 67,000 acres of Public Reserved Land inventoried in 1975.

A. INVENTORY

For the purpose of the inventory, the public lands were divided into three regions referred to as the Western, Northern and Southern-Coastal Regions. Each region contains 23,000 acres of public lands. Two hundred variable radius plots were sampled. In addition, 3-P sampling was done on the same plots to construct regional volume tables. The output of this inventory includes, for each type: stems/acre, volume (ft³)/acre, and five-year radial growth increment.

B. GROWTH

Volume growth by type within a region was determined on a per acre basis by predicting 1986 stand and stock tables from 1976 stand stock tables, applying historical growth rates, and calculating the differences between future and present stock tables. The results were allocated to each management parcel based on the total acreage of each forest type within the parcel.

The growth rates are estimates of gross growth. Ingrowth from the 4" d.b.h. class to the 5" class was included but mortality was not. Therefore, growth rates appear to exceed typical Maine rates. A reliable measure of mortality and cull increment is being developed and will be used to adjust growth estimates.

C. SILVICULTURAL PRESCRIPTIONS

The major silvicultural system used on the Public Reserved Lands is individual tree and small group selection within the context of unevenaged management. General prescriptions were developed from existing silvicultural guidelines for spruce-fir and northern hardwood types.

D. ALLOWABLE HARVEST

A harvest schedule and residual volume estimate by type was developed using the inventory, growth estimates, and silvicultural prescriptions outlined above.

Important Note:

Statistical reliability of the data varies when it is allocated to a particular management unit. Accordingly, adjustments are made in silvicultural prescriptions and allowable harvests to account for on-site conditions when preparing operating plans for a scheduled treatment on a given management unit.

TABLE 6W

PRESENT (1976) STAND TABLE SUMMARY WESTERN REGION. STEMS/
ACRE DISTRIBUTION BY TYPE¹ AND D.B.H. CLASS.

Type	S2	S3	M2	M3	H2	H3
D.B.H. Class						
5-9	371	399	282	190	213	140
10-15	46	76	36	48	32	55
16 and up	2	0	3	7	4	12
Total	419	475	321	345	249	207

¹ S1, M1, and H1 are not included because of insufficient data.

TABLE 7W

FUTURE (1986) STAND TABLE SUMMARY WESTERN REGION. STEMS/
ACRE DISTRIBUTION BY TYPE¹ AND D.B.H. CLASS.

Type	S2	S3	M2	M3	H2	H3
D.B.H. Class						
5-92	395	459	315	242	224	155
10-15	74	110	51	66	50	68
16 and up	3	3	4	12	5	16
Total	472	562	370	320	279	239

¹ S1, M1, and H1 are not included because of insufficient data.

² Includes ingrowth from 4" d.b.h. class.

TABLE 8W

PRESENT (1976) STOCK TABLE SUMMARY WESTERN REGION. VOLUME
(FT³)/ACRE DISTRIBUTION BY TYPE¹ AND D.B.H. CLASS.

Type	S2	S3	M2	M3	H2	H3
D.B.H. Class						
5-9	1334	2468	1153	734	996	778
10-15	798	431	587	1237	495	950
16 and up	146	0	137	520	204	635
Total	2278	2899	1877	2491	1695	2363

¹ S1, M1, and H1 are not included because of insufficient data.

TABLE 9W

FUTURE (1986) STOCK TABLE SUMMARY WESTERN REGION. VOLUME
(FT³)/ACRE DISTRIBUTION BY TYPE¹ AND D.B.H. CLASS.

Type	S2	S3	M2	M3	H2	H3
D.B.H. Class						
5-9 ²	1603	1925	1634	1159	1366	930
10-15	1138	1898	953	1332	932	1506
16 and up	128	0	197	733	297	946
Total	2869	3828	2784	3224	2595	3382

¹ S1, M., and H1 are not included because of insufficient data.

² Includes ingrowth from 4" d.b.h. class.

